

position where said reticle is set and a substrate setting position where said photosensitive substrate is set; and

a correcting step for correcting degradation of optical characteristic of said projection system caused by setting said correction member at said predetermined position; wherein said correcting step includes a first adjusting step for adjusting at least one of said reticle setting position and said substrate setting position.

3. (Amended) The method for manufacturing an exposure apparatus according to claim 1, wherein said correcting step further includes a first calculating step, prior to said setting step, for calculating an adjusting amount of at least one of said reticle setting position and said substrate setting position in order to correct said degradation of optical characteristic produced in accordance with the thickness of said correction member; and

said first adjusting step includes a step for adjusting at least one of said reticle setting position and said substrate setting position based on a first calculated information obtained in said first calculating step.

25. (Amended) A method for manufacturing an exposure apparatus comprising the steps of:

a providing step for providing a projection system projecting and exposing an image of a predetermined pattern formed on a reticle to a photosensitive substrate;

a measuring step for measuring residual aberration in said projection system;

a processing step for processing a correction member for correcting said residual aberration in said projection system based on measured information obtained in said measuring step;

an inserting step for inserting a correction member obtained in said processing step at a predetermined position in an optical path between a reticle setting position where

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said reticle is set and a substrate setting position where said photosensitive substrate is set;

and

a first adjusting step for adjusting at least one of said reticle setting position

and said substrate setting position in accordance with a change in an object-to-image distance

of said projection system produced by inserting said correction member.

Please add the following claims 56-63:

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--56. (New) A method for manufacturing an exposure apparatus, comprising the

steps of:

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a first providing step for providing a projection system projecting and

exposing an image of a predetermined pattern formed on a reticle onto a photosensitive

substrate;

a second providing step for providing a correction member correcting residual

aberration in said projection system;

a setting step for setting said correction member at a predetermined position in

an optical path between a reticle setting position where said reticle is set and a substrate

setting position where said photosensitive substrate is set; and

a correcting step for correcting degradation of optical characteristic of said

projection system caused by setting said correction member at said predetermined position;

wherein said correcting step includes a first adjusting step for adjusting at least

one of said reticle setting position and said substrate setting position.--

--57. (New) An exposure apparatus product made by the method of claim 56.--

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--58. (New) A process for improving an optical characteristic of a projection

system for projecting and exposing an image of a predetermined pattern formed on a reticle

onto a photosensitive substrate, comprising the steps of:

Fig 3
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a providing step for providing a correction member correcting residual aberration in said projection system;
a setting step for setting said correction member at a predetermined position in an optical path between a reticle setting position where said reticle is set and a substrate setting position where said photosensitive substrate is set; and
a correcting step for correcting degradation of optical characteristic of said projection system caused by setting said correction member at said predetermined position;
wherein said correcting step includes a first adjusting step for adjusting at least one of said reticle setting position and said substrate setting position.--

--59. (New) A projection system product improved by the process of claim 58.--

--60. (New) A process for improving an optical characteristic of a projection system for projecting and exposing an image of a predetermined pattern formed on a reticle onto a photosensitive substrate, comprising the steps of:

Fig 35
a measuring step for measuring residual aberration in said projection system;
a processing step for processing a correction member for correcting said residual aberration in said projection system based on measured information obtained in said measuring step;

an inserting step for inserting the correction member obtained in said processing step at a predetermined position in an optical path between a reticle setting position where said reticle is set and a substrate setting position where said photosensitive substrate is set; and

a first adjusting step for adjusting at least one of said reticle setting position and said substrate setting position in accordance with a change in an object-to-image distance of said projection system produced by inserting said correction member.--

--61. (New) A projection system product improved by the process of claim 60.--